CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ITTENTION OF FILE DATE May 5, 1983

EPARTMENT

On Wednesday, May 4, 1983, this office received a call from fire marshall Jim Dancy about a gasoline odor in the sewer at Fort and University and Stanford on Tuesday evening. He said he could smell the gasoline in the manhole, but that it didn't register on the explosion meter. Bob Corson & I checked manholes #17 at Fort & University, #12 on south Fort and #22 at Fort and Stanford. We didn't smell any gasoline at this time and nothing registered on the explosion meter. We will check this area at a later time.

Karen Chandler

Karen Chandler
Water Pollution Control Inspector II
Surveillance & Enforcement

1200 W. Sunshine SIGNED

1200 W Sunshine

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ATTENTION OF FILE DATE December 7, 1983

DEPARTMENT

Tuesday, November 29, 1983

Time	Street	MH#	% of L.E.L.
10:30 a.m.	Stanford	22	0
	University	17	5
	"	18	5
	Fort	12	0
	"	21	0

Wednesday, November 30, 1983

Time	Street	MH#	% of L.E.L.
1:45 p.m.	Stanford	22	0
	University	17	10
	"	18	15
	Fort	12	0
	"	21	0

Joe Montgomery of Montgomery Metalcraft called about Taylor Petroleum. He had several Petrotite tests to perform and he was trying to schedule the different businesses. Bill Crossland said he would write his letter to Taylor Petroleum this week.

Thursday, December 1, 1983

Time	Street	MH#	% of L.E.L.
10:00 a.m.	Stanford	22	0
	University	17	<5
	"	18	<10
	Fort	12	2
	"	21	<5

Friday, December 2, 1983

Time	Street	MH#	% of L.E.L.
10:30 a.m.	Stanford	22	0
	University	17	11
	"	18	12
	"	19	10
	Fort	12	0
	"	21	0-2
	Storm Sewer		0

Monday, December 5, 1983

Time	Street	MH#	% of L.E.L.
10:15	Stanford	22	0
	University	17	25
	"	18	0
	Fort	12	0
	"	21	0

Gene and I closed the cover of manhole 21 on Fort Street.

cc: Bob Schaefer, P.E., Supt. of Sanitary Services
Henry Cole, P.E., Sanitary Engineer
Greg Perkins, Dept. of Natural Resources
File

Karen Chandler

SIGNED Karen Chandler
Water Pollution Control Inspector III
Surveillance & Enforcement
1200 W. Sunshine

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ATTENTION OF FILE DATE December 7, 1983

DEPARTMENT

An addendum to memo to Bill Crossland of 11-23-83
Re: Gasoline in sewer at Fort and Sunshine

Wednesday, November 23, 1983

Time	Street	MH#	% of L.E.L.
2:30 p.m.	Stanford	22	0
	University	17	5
	"	18	<10
	Fort	12	0
	"	21	0

Gene and I picked up the fire hose and stand.

Friday, November 25, 1983

Time	Street	MH#	% of L.E.L.
9:40	Stanford	22	0
	University	17	10
	"	18	0
	Fort	12	0
	"	21	2-3
1:15	Stanford	22	0
	University	17	17
	"	18	0
	Fort	12	0
	"	21	10

Sunday, November 27, 1983

Time	Street	MH#	% of L.E.L.
12:00 p.m.	Stanford	22	0
	University	17	10
	"	18	15
	Fort	12	0
	"	21	0

It rained Saturday evening & Sunday day.

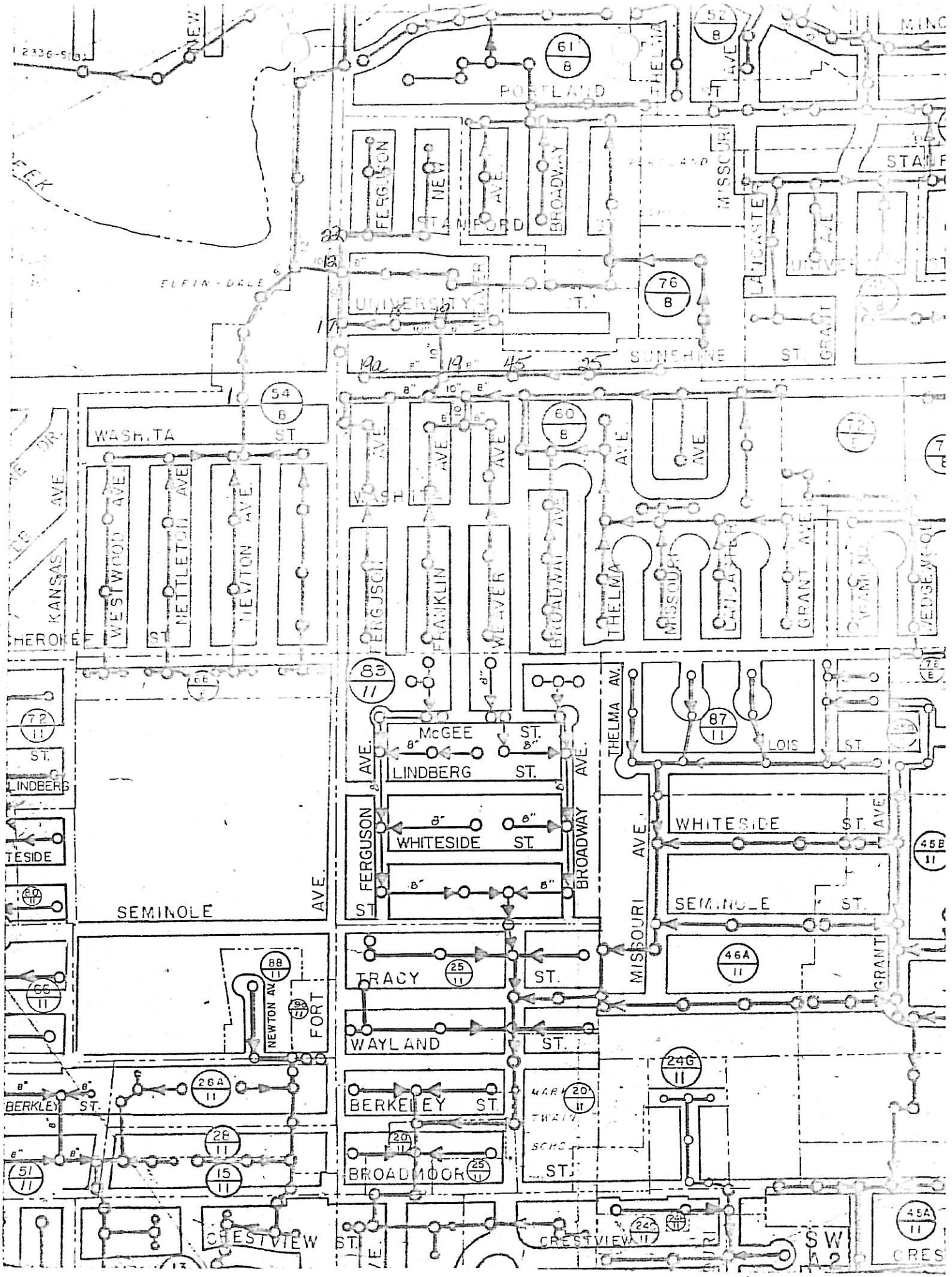
Monday, November 28, 1983

Time	Street	MH#	% of L.E.L.
2:30 p.m.	Stanford	22	0
	University	17	0
	"	18	0
	Fort	12	7
	"	21	0

I called Sharon Jones to tell her that the fire marshall would give her 30 days to get her tanks and lines checked after he sent his letter.

SIGNED

1200 W. Sunshine



1200 W. Sunshine

October 20, 1983

Mr. Robert Boyar
Webster Companies
2400 E. Bennett
Springfield, MO 65804

Dear Mr. Boyar:

As you know, for the past month the City of Springfield has been experiencing a problem of flammable hydrocarbon products entering its sanitary sewer system in the 1600-1800 block of south Fort, that were traced to a leaking regular tank and gasoline line at Harold Peck's 66 Station at 1211 W. Sunshine. The fuel tanks and lines are owned by Webster Companies. You had the fuel lines and tanks tested as we requested and you replaced all of the fuel lines.

Because we are still detecting dangerously high levels of flammable hydrocarbon products in the sanitary sewer, especially after rainfall events, this department is requiring you to dig an interceptor trench and install a recovery well between Harold Peck's 66 Station and the house at 1754 S. Fort. This should be completed before November, 1983.

Enclosed is a suggested design for the trench and well taken from the American Petroleum Institute's Underground Spill Cleanup Manual.

Due to the nature of the problem, further action may be required to protect the health, life, and property of those affected by the migration of the lost product.

If you have any questions, please don't hesitate to call.

Yours truly,

Karen A. Chandler
Water Pollution Control Inspector II
Surveillance & Enforcement

KAC:js

cc: Robert R. Schaefer, P.E., Superintendent of Sanitary Services
Henry Cole, Sanitary Engineer
Greg Perkins, Dept. of Natural Resources
Dale Bittle, Chief Fire Marshall
File

1200 W. Sunshine

generally applicable to crude oils. Not all of the specification tests are of importance in a spill situation. However, the series of methods for the analysis of waterborne oils is particularly appropriate to the identification of unknown oils.

The second series of methods particularly applicable to unknown oils is in the U.S. Coast Guard's *Oil Spill Identification System* (Report No. CG-D-52-77). Some of these methods are similar to those in the ASTM Standards on waterborne oils; however, the report also contains some more elaborate techniques.

V. CLEANUP TECHNIQUES

After a spill or leak has been absorbed into the ground, a recovery system may be used to remove the product. Because many conditions affect migration and recovery of product, no single system works in all or even most cases. Therefore, recovery systems usually must be tailor-made for a particular spill or leak. As techniques for locating, containing and recovering free-floating product on the water table are extremely complicated, it is strongly recommended that recovery projects be directed by someone trained and experienced in this work.

5.1 Test Wells

Once it is known that product has reached the water table, the extent of the contamination and its potential environmental and safety hazards should be determined by drilling a series of test wells. The effectiveness of cleanup operations is greatly increased by establishing the area's soil characteristics, water table depth and gradient.

The first few test wells should be located near the probable source of the spill. Also, wells should be located near an affected area; for example, near a house with gasoline in the basement. If a test well reveals contamination, others must be drilled farther out, until the area of contamination can be fairly well defined. In large concentrated spills, the areas sloping upstream or to the sides of the spill should be investigated, since mounding of product can cause uphill migration. Site conditions may suggest other areas for test wells.

After a series of test wells has defined the scope of the contaminated area, it must be monitored periodically for product thickness and for spread of contamination. When necessary data on the spill area have been accumulated, a recovery plan can be devised.

5.2 Interceptor Trenches

Many spills into the ground encounter a high water table, impervious soil or a rock layer and remain near the surface. These spills may be contained and recovered with a trench, ditch or drain system designed to intercept the product (Figure 12).

In a shallow spill, it is normally possible to respond more rapidly and effectively with an interceptor trench or drain than by using a well system, since equipment and contractors for this type of installation are readily available in most areas and the recovery techniques are less complicated.

Trench-type recovery systems are generally limited to depths of six to 10 feet. Depths greater than these may be impractical due to soil conditions, the capabilities of normally available excavating equipment and the large amount of soil which must be removed.

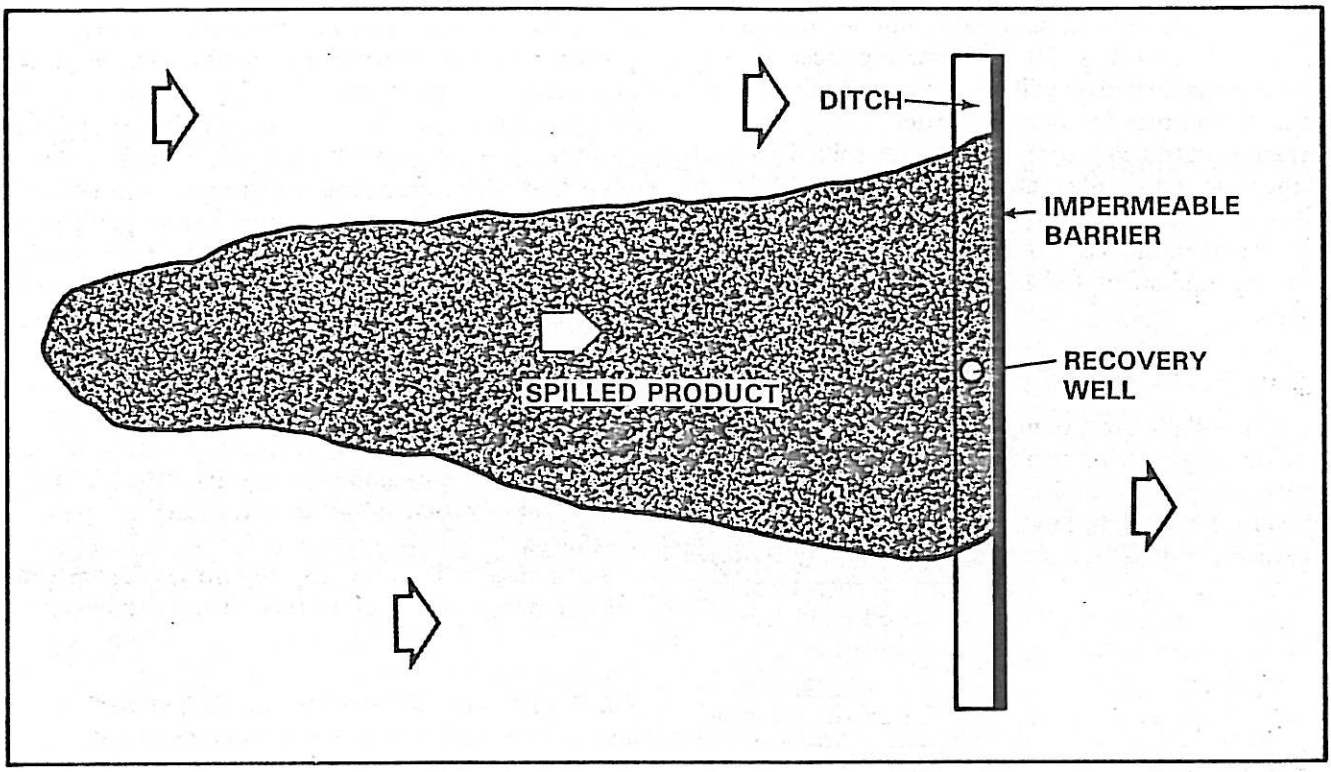
A ditch should be constructed across the entire front of the migrating body of oil. If product has entered a confined structure such as a building or sewer, the trench should be dug as close as possible to the structure without damaging its basement or foundation.

If soil conditions will permit, ditches should be kept as narrow as the bucket on the excavating equipment, and should be constructed to a depth of one to four feet below the water table surface. The downstream wall should be lined with an impermeable material such as polyethylene film (Figure 12) to block floating oil but permit water to pass below. The barrier material should be placed a minimum of a few feet above the product level and a minimum of one foot below the oil/water interface. If the ditch will be used as a withdrawal point to lower the water table, the barrier must be situated deep enough to intercept the product at the lowest drawdown level. As it usually is advisable to fill the ditch with coarse material, such as crushed stone or gravel, the film must be of sufficient strength to prevent puncture or tearing.

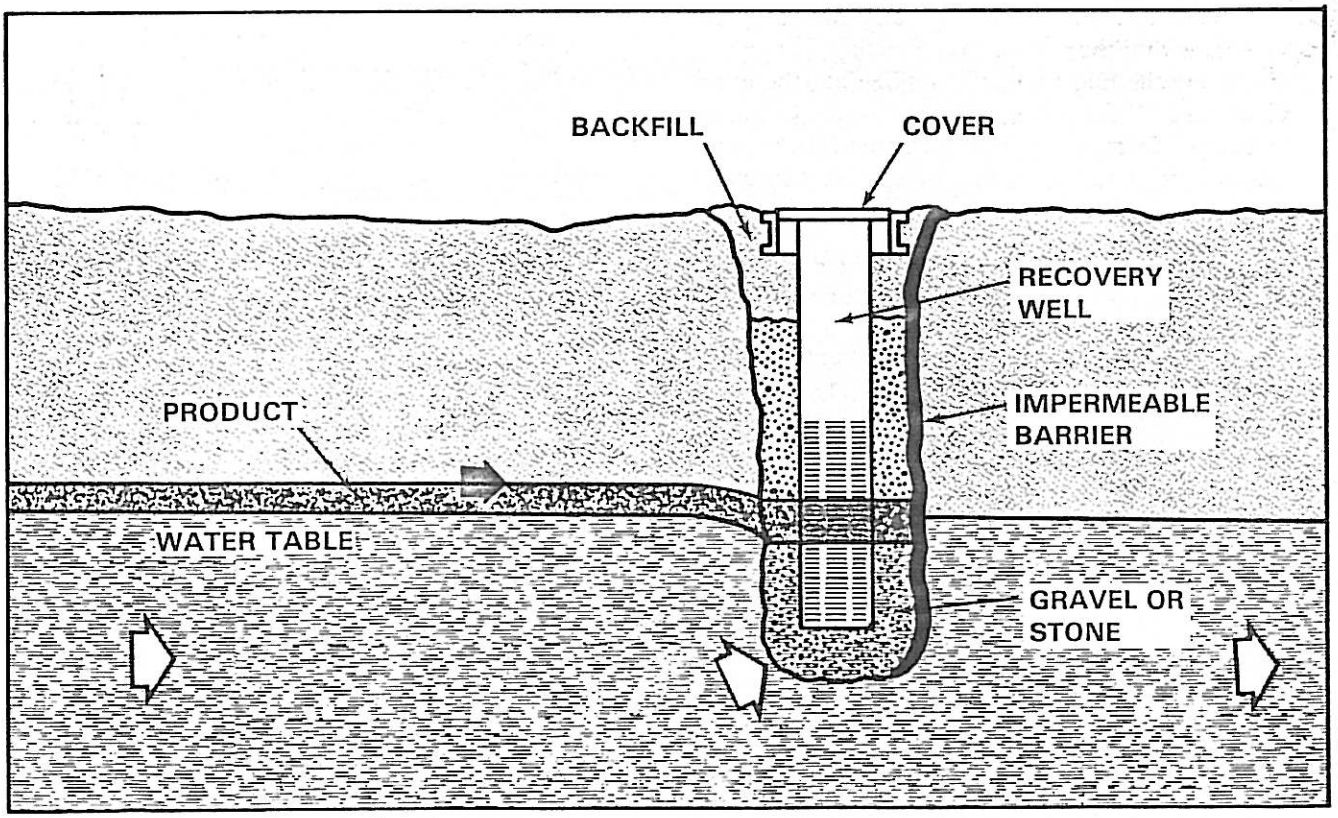
One or more randomly slotted culvert pipes, or similar material wrapped with plastic window screening, should be lowered to the bottom of the trench. The bottom of the culvert should be capped to prevent silt build-up. Once the culvert is in place, the ditch should carefully be filled to within two feet of the native ground surface with a very porous material, such as crushed stone or gravel. Soil should then be used to fill the remainder of the trench.

Groundwater can be removed from the trench to influence the flow of product, or—if left open—the trench

1200 W. Sunshine



PLAN VIEW



CROSS SECTION

Figure 12 — Interceptor Trench

1200 w. Sunshine

can serve as a collection point for skimming. It is important to note that pumping or skimming must be continuous, or collected oil will tend to move to the ends of the ditch and pass around the barrier.

If an open trench is used to contain a spilled product on the water table, all safety precautions must be taken to eliminate the possibility of explosion or fire. Safety precautions must also be observed when selecting pumping equipment for use in flammable liquids or vapors.

5.3 Pumped Trenches

The installation of a pumped intercepting system will increase the area of influence of the collection trench by lowering the water table, thus increasing the rate of recovery. Pumping to lower the water table can create excessive amounts of waste water which may be contaminated by the spill. Therefore, before installing pumped systems, it should be considered whether treatment and disposal are feasible and permissible.

Construction procedures for pumped trenches or drain systems are similar to those for gravity drainage. The primary difference is that the interceptor trench or drainage pipe needs to be excavated to greater depth to allow for the lowering of the water table. This system can be designed to automatically maintain a constant water table within the trench for collecting, containing and skimming the migrating oil running into the interceptor trench.

When it is determined that a pumped interceptor system may be required, a knowledgeable and experienced contractor should be consulted on its design and installation.

5.4 Well Systems

Mobile product will normally be better contained and recovered with properly designed continuous-pumping recovery wells. They can be designed with the proper size, depth and pumping rate to create an adequate cone of depression in the water table thereby containing the oil and influencing its flow to the recovery point.

If the water table is nearly horizontal, a shallow depression will suffice to confine the floating product. If the water table is inclined, as is common, the cone must be deep enough to reverse the gradient. The point at which the reversal occurs, called the "divide," must lie beyond the contaminated area in order to contain the oil.

Once a well is installed, a depression cone of considerable extent normally can be created in a matter of minutes or hours. In most cases, this is enough time to install a recovery system before mobile product can be carried out of reach by moving groundwater. The importance of the drawdown in relation to the gradient also must be kept in mind (see Figure 13).

Although a cone of depression can be maintained by continuous pumping with one pump situated below the surface of the water table, floating oil will not be recovered unless it is drawn down to the pump's withdrawal point. It is, therefore, important when using a single recovery pump to locate it at a depth where it will both lower the water table and skim collected product. As a minimum, the effluent from such a system must be directed into an oil/water separator. At times, it may be necessary to set two or more separators in series to allow for further water purification. In some cases involving badly contaminated groundwater, additional treatment of produced water will be necessary prior to discharge.

As a rule, it is better to use two pumps instead of one—a pump to maintain the cone and a smaller one to pump the contaminant from the surface of the water. This arrangement reduces or eliminates the volume of fluid which must be separated for proper disposal. This also allows pumping of noncontaminated groundwater to a point of free discharge.

Depending on the seriousness of the spill, pumping may be required for an extended period of time. Ideally, pumping should continue through several fluctuations of the water table and should be abandoned only after the mobile product has been reduced to an acceptable level.

Creation of an unnecessarily large cone of depression may result in contamination of the soil and water table to a greater depth. It will also produce an excessive volume of water.

Spills in a concentrated area where trenches or drains are not practical or desirable sometimes may be recovered by pumping from contaminated test wells. Periodic removal of product accumulated in these wells may be adequate to contain and recover the product. Pumping of the test wells can also create a cone of depression in the water table to increase the recovery rate.

5.5 Effects of Pumping

The objective of the drawdown well is to establish a depression in the water table that prevents the oil from spreading and concentrates it for removal. The rate at which fluid is withdrawn and the permeability of the soil determines the size and rate of development of the depression.

Since permeability varies, the depression-forming process is different in all areas. When enough informa-

1200 W. Sunshine

November 16, 1983

Certified No. P04 9037038

Mr. Robert Boyar
Webster Companies
2400 E. Bennett
Springfield, MO 65804

Dear Mr. Boyar:

Due to the large amount of rainfall the city has received in the past month, the two recovery wells that were installed in the interceptor trench at Harold Peck's 66 station at 1211 W. Sunshine have water standing in them. The explosion meter reading in both of these wells is 50% of the Lower Explosion Limit (L.E.L.). It is important to pump out these wells occasionally or the hydrocarbon product will move to the ends of the ditch, pass around the impermeable barrier and enter the city's sanitary sewer system.

It is our recommendation that you check these wells at least twice a month. When water is standing in the wells they should be pumped out with an explosion-proof pump and the hydrocarbon product skimmed off for disposal in an approved manner.

If you have any questions, please don't hesitate to call 864-1924.

Yours truly,

Karen Chandler
Water Pollution Control Inspector II
Surveillance & Enforcement

KC:js

cc: Robert R. Schaefer, P.E., Superintendent of Sanitary Services
Henry Cole, P.E., Sanitary Engineer
Greg Perkins, Department of Natural Resources
Dale Bittle, Chief Fire Marshall
File

1200 W. Sunshine

STODDARD EQUIPMENT CO.
LP Gas and Service Station Equipment
Sales and Service
3536 E. SUNSHINE SPRINGFIELD, MISSOURI 65804

Nov. 22, 1983

Department of Public Works
Attn: Karen A. Chandler
830 Boonville Ave
Springfield, Mo. 65802

Dear Ms. Chandler

This letter is to certify that we have tested and repaired leaks at the Phillips Service Station at Sunshine and Fort streets.

Our initial tests found leaks in the west 4,000 gallon regular storage tank, the no lead product line, and the diesel vent line. All other lines and tanks checked OK at 4 p.s.i. on tanks and vent lines and 70 p.s.i. on product lines.

We, at the expense of Webster Oil Co. replaced the regular and no lead product lines complete and replacedthe west regular tank. Webster Oil Co. decided to replace the regular product line even though it did not leak to insure a future problem of this same type would not occur due to the line being of same age as the ones that failed.

All new lines and the tank were air tested and inspected by the local Fire Marshals after installations were completed.

If I can be of any further help, feel free to call.

Sincerely

W.O. Hawkins Jr.

W.O. Hawkins, Jr.
Assistant Manager

cc Jack Webster III
Bob Boyar

1200 W. Sunshine

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ATTENTION OF FILE DATE 11-7-83

DEPARTMENT

On Tuesday, September 27, 1983, Bill West reported a strong gasoline odor in the sewer at Fort and Stanford. The explosion meter read 100% of L.E.L. at manhole 12 and 30% of L.E.L. at manhole 22 on Fort Street. Various other manholes were checked visually and with the meter in order to determine the source of the leak. The results were:

Street	MH#	% of L.E.L.
Sunshine	1	0
University	17	5
"	18	0
"	19	0
Stanford	27	0
Fort	21	5

Harold Peck, of Harold Peck's Phillips 66 station at 1211 W. Sunshine, said that last week he had noticed they were pumping air through the dispensers on the regular pumps. David Reeves, of Stoddard Equipment, said they had tested the regular line Monday and it wouldn't hold pressure. The line was rubber and had been in the ground 15-20 years. Stoddard found a hole in the line to the regular pump and they replaced that section of the line. On Tuesday they air tested the line again and for 4½ hours at 60 lbs. of pressure, and it didn't lose a pound of pressure.

Omer Boyce flushed the lines that run into manhole 12 on Fort Street twice. The night crew flushed these lines once each shift. The covers on manholes 12 and 22 on Fort Street were left off overnight to vent off the gasoline vapors.

Wednesday, September 28, 1983:

Time	Street	MH#	% of L.E.L.
9:00 a.m.	Fort	12	20
3:00 p.m.	"	12	100

Omer Boyce flushed the lines going into manhole 12 on Fort and the night crew flushed these lines once each shift.

Thursday, September 29, 1983:

Time	Street	MH#	% of L.E.L.
9:00 a.m.	Fort	12	15
1:30 p.m.	"	12	100
2:30 p.m.	"	12	100

Fire Marshall Dave Wilson also got 100% of L.E.L. at mnnhole 12 at 2:30 p.m. I met with Ray Toates of City Utilities to borrow a water meter so that we can flush the line continuously from the fire hydrant east of manhole 19 on west University Street. Gene Pabst, J.D. Slaughter and I set up the fire hoses and began flushing the line. The City Utilities meter is a Worthington-Gamon meter. The beginning reading was 0000740cf.

I asked Harold Peck to have all of the tanks and lines tested. He said he would call the owner (Webster Oil Company) in the morning and have it done. The manager at Taylor Express Mart at 1201 West Sunshine was gone for the day and I was unable to talk to her at this time.

SIGNED

1200 W. Sunshine

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ATTENTION OF FILE DATE 11-7-83

DEPARTMENT

Mrs. Deeds, at 1650 S. Fort, had called to report a gasoline odor in her bathroom, but it was gone when I got there. She told me that she had smelled the odor on and off since July.

I called the telephone company to report that we had gasoline in the sewer and probably in the ground because they have buried cables in this area.

Friday, September 30, 1983:

Time	Street	MH#	% of L.E.L.
5:00 p.m.	Fort	12	30
	"	17	40
	"	21	20

I talked to Bob Boyar of Webster Oil Companies and he said he would have the tanks and lines tested on Monday. The residents of 1754 S. Fort complained of a gasoline odor in their house, so I asked Ralph Whitworth to flush the line between manholes 17 and 21 on Fort.

Saturday, October 1, 1983

Time	Street	MH#	% of L.E.L.
8:30 a.m.	University	17	50
	"	18	<10
	Fort	12	40

I asked Gerald Noblett to have a crew flush between manholes 17 and 21 on Fort and opened up the cover of manhole 21 to allow the gasoline vapors to vent off.

Sunday, October 2, 1983

Time	Street	MH#	% of L.E.L.
3:30 p.m.	Univerity	17	30
	Fort	12	30
	"	21	50

Monday, October 3, 1983

Time	Street	MH#	% of L.E.L.
10:00 a.m.	Stanford	22	10
	Fort	12	30
	"	21	40
	University	17	15

Fire Marshall Jim Dancy also called Bob Boyar over the weekend and asked him to have all the lines and tanks tested.

I talked to Sharon Jones, the manager at Taylor Express Mart (Taylor Petroleum), and she hasn't noticed any product loss. They have three tanks: regular, no lead, and premium. The regular tank was put in about a year ago and holds 8,000 gallons of gasoline. There is an abandoned tank on the west side of her property. The tank had about 1" of water in the bottom of it and 100% of L.E.L. on the explosion meter. I told her she needed to contact a fire marshall to find out the procedure for abandoning a tank.

SIGNED

1200 W. Sunshine

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

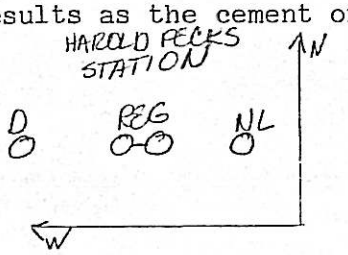
ATTENTION OF FILE DATE 11-7-83

DEPARTMENT

Time	Street	MH#	% of L.E.L.
3:30 p.m.	Fort	21	15

One of the residents in the house at 1754 S. Fort said the odor wasn't as strong in the house.

One of the Stoddard Equipment operators said it might be two or three days before they would have any results as the cement on the top of the tanks had to be jack-hammered off.



Tuesday, October 4, 1983
It rained all night.

Time	Street	MH#	% of L.E.L.
10:30 a.m.	Fort	12	80
"	"	21	50
2:45	Stanford	22	0
	Fort	12	25
	"	21	5

It started raining again about 2:30 p.m.

Wednesday, October 5, 1983

Time	Street	MH#	% of L.E.L.
9:40 a.m.	Stanford	22	10
	Fort	12	40
	"	21	5

The siphon birdge between the two regular tanks was a rubber hose. There were no apparent leaks in the hose but Stoddard Equipment replaced it.

Time	Street	MH#	% of L.E.L.
3:00 p.m.	Stanford	22	5
	University	17	0
	Fort	12	80
	"	21	0

I gave Dave Reeves of Stoddard Equipment my card and asked him to send me the results of his tests when he's done.

Thursday, October 6, 1983

Time	Street	MH#	% of L.E.L.
9:00 a.m.	Stanford	22	40
	University	17	50
	Fort	12	75
	"	21	50

Dave Reeves said they put pressure on one of the regular lines last night and it didn't hold. He wasn't sure if the problem was in the tank or the vent line.

SIGNED

1200 W. Sunshine

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ATTENTION OF FILE DATE 11-7-83

DEPARTMENT

Time	Street	MH#	% of L.E.L.
4:00	Stanford	22	0
	Fort	12	60

I called Jim Dancy about an interceptor trench, but he said the fire department couldn't make that kind of recommendation.

Friday, October 7, 1983

Time	Street	MH#	% of L.E.L.
11:00 a.m.	Stanford	22	0
	University	17	35
	Fort	12	30
	Fort	21	35

Dave Reeves said that the diesel tank wouldn't hold pressure, but sticking the tank didn't indicate a product loss.

12:00 p.m. Bob Boyar went to the station to shut down all of the dispensers and I met with him at this time. I reminded him that Webster Oil Company was liable for any problems caused by hydrocarbon products in the sewer and recommended that he build an interceptor trench with a recovery well and gave him a copy of the section on interceptor trenches in Chapter V "Clean-Up Techniques" in the Underground Spill Cleanup Manual published by the American Petroleum Institute. At this time, he said that he would dig a trench and that he might get rid of the tanks altogether. He didn't know how much product had been lost.

4:00 p.m. I called Bob Boyar at work and he said that he was having all of the gasoline removed from the tanks, while Stoddard Equipment finished testing them. At this time he said he wouldn't dig a trench, but would take core samples.

Time	Street	MH#	% of L.E.L.
4:30 p.m.	Stanford	22	0
	University	17	20
	Fort	12	0
	"	21	45

Saturday, October 8, 1983

Time	Street	MH#	% of L.E.L.
2:30 p.m.	Standord	22	0
	University	17	20
	Fort	12	30
	"	21	15

Sunday, October 9, 1983

Time	Street	MH#	% of L.E.L.
7:00 p.m.	Stanford	22	0
	University	17	15
	Fort	12	15
	"	21	15

SIGNED

1200 W. Sunshine

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ATTENTION OF FILE DATE 11-7-83

DEPARTMENT

Monday, October 10, 1983

Time	Street	MH#	% of L.E.L.
10:30 a.m.	Stanford	22	0
	University	17	30
	"	18	0
	Fort	12	10
	"	21	30

2:30 p.m. The diesel tank wasn't leaking, the leak was in the vent line, they were still testing the regular tanks.

Tuesday, October 11, 1983

Dave Reeves of Stoddard Equipment said that the west regular tank wouldn't hold pressure. This tank was buried in lime chat which is very corrosive. The no lead line wouldn't hold pressure. Dave said they would replace all of the lines, replace or abandon the regular tank and the service station would probably be back in business by the weekend.

Time	Street	MH#	% of L.E.L.
4:00 p.m.	Stanford	22	40
	University	17	30
	"	18	0
	Fort	12	40
	"	21	25

It started raining hard shortly after 4:00 p.m.

Wednesday, October 12, 1983

Time	Street	MH#	% of L.E.L.
3:00 p.m.	Stanford	22	15
	University	17	5
	Fort	12	15
	"	21	<5

Stoddard Equipment was replacing all of the lines.

Thursday, October 13, 1983

Time	Street	MH#	% of L.E.L.
11:00 a.m.	Stanford	22	0
	University	17	25
	"	18	100
	Fort	12	<5
	"	21	5
	Sunshine	45	0
	"	19	0
	"	19a	0

Friday, October 14, 1983

Street	MH#	% of L.E.L.
Stanford	22	0
University	17	40
"	18	0
Fort	12	20
"	21	35

SIGNED

1200 W. Sunshine

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ATTENTION OF FILE DATE 11-7-83

DEPARTMENT

Dave Reeves of Stoddard Equipment said that new fuel lines were pressure tested section by section and the Fire Department inspected the lines.

Saturday, October 15, 1983

Street	MH#	% of L.E.L.
Stanford	22	0
University	17	40
"	18	0
Fort	12	35
"	22	35

Sunday, October 16, 1983

Street	MH#	% of L.E.L.
Stanford	22	30
University	17	30
"	18	0
Fort	12	50
"	21	0

It rained all night and day.

Monday, October 16, 1983

Time	Street	MH#	% of L.E.L.
10:30 a.m.	Stanford	22	0
	University	17	50
	"	18	0
	Fort	12	50
	"	21	25

Tuesday, October 18, 1983

Time	Street	MH#	% of L.E.L.
1:30 p.m.	Stanford	22	0
	University	17	50
	"	18	0
	Fort	12	50
	"	21	25

I talked to Bob Boyar on the phone. He said they lost approximately 800 gallons of product. I recommended that he report the loss to the Missouri Department of Natural Resources.

At this time he thought he would abandon the leaking tank, and I advised him to contact the fire marshall about the procedure.

They were waiting for an agent from Phillips 66 to inspect the station and advise them about clean up procedure.

SIGNED

1200 W. Sunshine

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ATTENTION OF FILE DATE 11-9-83

DEPARTMENT

Wednesday, October 19, 1983

Street	MH#	% of L.E.L.
Stanford	22	<5
University	17	35
"	18	0
Fort	12	50
"	21	20

Thursday, October 20, 1983

Street	MH#	% of L.E.L.
Stanford	22	<5
University	17	35
"	18	0
Fort	12	35
"	21	35

I sent a letter to Bob Boyar, of Webster Petroleum, requiring them to dig a trench by November 1, 1983.

Friday, October 21, 1983

Time	Street	MH#	% of L.E.L.
5:45 p.m.	Stanford	22	0
	University	17	5
	"	18	100
	Fort	12	0
	"	21	0

I reported the 100% of L.E.L. in manhole 18 to the Fire Department.

Saturday, October 22, 1983

Time	Street	MH#	% of L.E.L.
2:30 p.m.	Stanford	22	0
	University	17	30
	"	18	5
	Fort	12	0
	"	21	<10

Sunday, October 23, 1983

Time	Street	MH#	% of L.E.L.
3:30 p.m.	Stanford	22	0
	University	17	15
	"	18	0
	Fort	12	0
	"	21	<5

SIGNED

1200 W. Sunshine

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ATTENTION OF FILE DATE 11-9-83

DEPARTMENT

Monday, October 24, 1983

Time	Street	MH#	% of L.E.L.
9:30 a.m.	Stanford	22	0
	University	17	15
	"	18	0
	Fort	12	0
	"	21	<10

Turned off water, the meter read 0431810

Time	Street	MH#	% of L.E.L.
4:00 p.m.	Stanford	22	0
	University	17	5
	"	18	0
	Fort	12	0
	"	21	5

Tuesday, October 25, 1983

Time	Street	MH#	% of L.E.L.
10:30 a.m.	Stanford	22	<5
	University	17	20
	"	18	0
	Fort	12	10
	"	21	0
3:15 p.m.	Stanford	22	<5
	University	17	<10
	"	18	0
	Fort	12	<15
	"	21	0

Wednesday, October 26, 1983

Time	Street	MH#	% of L.E.L.
3:00 p.m.	Stanford	22	0
	University	17	<5
	"	18	45
	Fort	12	<5
	"	21	0

Thursday, October 27, 1983

Time	Street	MH#	% of L.E.L.
10:30 a.m.	Stanford	22	0
	University	17	30
	"	18	0
	Fort	12	0
	"	21	20

SIGNED

1200 W. Sunshine

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ATTENTION OF FILE DATE 11-9-83

DEPARTMENT

I talked to Bob Boyar, of Webster Oil Company, on the phone to see if he had any questions about my letter. He said he will dig an interceptor trench Monday or Tuesday. His estimate of product loss was between 700-800 gallons. He said that Harold Peck owned that gasoline and didn't keep complete inventory records. Bob said that in the future he will check the records twice a week.

Time	Street	MH#	% of L.E.L.
2:00 p.m.	Stanford	22	15
	University	17	45
	"	18	10
	Fort	12	0
	"	21	0

Water was turned on again. The resident of 1736 S. Fort said she could smell gasoline in her house at times, particularly at night.

Friday, October 28, 1983

Time	Street	MH#	% of L.E.L.
11:00 a.m.	Stanford	22	0
	University	17	15
	"	18	20
	Fort	12	0
	"	21	<5

Saturday, October 29, 1983

Time	Street	MH#	% of L.E.L.
5:30 p.m.	Stanford	22	<15
	University	17	10
	"	18	0
	Fort	12	10
	"	21	10

Monday, October 31

Time	Street	MH#	% of L.E.L.
9:15 a.m.	Stanford	22	10
	University	17	10
	"	18	0
	Fort	12	5
	"	21	<10
3:00 p.m.	Stanford	22	10
	University	17	15
	"	18	0
	Fort	12	20
	"	21	15

Stoddard Equipment started their trench. At the deepest spot, approximately 13 ft. down, there was a weak gasoline odor and the dirt was damp looking.

SIGNED

1200 W. Sunshine

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ATTENTION OF FILE DATE 11-22-83

DEPARTMENT

Tuesday, November 1, 1983

Time	Street	MH#	% of L.E.L.
10:45 a.m.	Stanford	22	<5
	University	17	15
	"	18	0
	Fort	12	5
	"	21	5

Stoddard Equipment finished the trench. Two wells were installed, one at the west end of the trench where the depth is approximately 7 feet, and the other is at the deepest part of the trench, approximately 13 feet deep. The trench is uneven, due to the rock layer. It rained all day and night.

Thursday, November 3, 1983

Time	Street	MH#	% of L.E.L.
4:00 p.m.	Stanford	22	0
	University	17	5
	"	18	0
	Fort	12	0
	"	21	0

Rained all evening.

Friday, November 4, 1983

Time	Street	MH#	% of L.E.L.
9:00 a.m.	Stanford	22	0
	University	17	5
	"	18	0
	Fort	12	5
	"	21	0

The residents at 1730 S. Fort complained of a gasoline odor in the basement on Thursday night. Omer Boyce flushed the line and said he had run into an obstruction There was no gasoline odor in the house this morning. I turned the hydrant off (reading 0447850).

Time	Street	MH#	% of L.E.L.
11:30 a.m.	Fort	12	25
	University	17	15
	"	18	0

I turned the hydrant on again.

Time	Street	MH#	% of L.E.L.
4:00 p.m.	Stanford	22	20
	University	17	15
	"	18	5
	Fort	12	25
	"	21	15

SIGNED

1200 W. Sunshine

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ATTENTION OF FILE DATE 11-22-83

DEPARTMENT

Saturday, November 5, 1983

Time	Street	MH#	% of L.E.L.
3:00 p.m.	Stanford	22	5
	University	17	5
	"	18	0
	Fort	12	0
	"	21	5

Sunday, November 6, 1983

Time	Street	MH#	% of L.E.L.
2:00 p.m.	Stanford	22	5
	University	17	10
	"	18	0
	Fort	12	0
	"	21	10

Monday, November 7, 1983

Time	Street	MH#	% of L.E.L.
2:00 p.m.	Stanford	22	<5
	University	17	15
	"	18	0
	Fort	12	0
	"	21	<5

Stoddard Equipment began digging up the old tank.

Tuesday, November 8, 1983

Time	Street	MH#	% of L.E.L.
9:20 a.m.	Stanford	22	0
	University	17	5
	"	18	0
	Fort	12	0
	"	21	5

I turned off the fire hydrant (reading 0454390)

Time	Street	MH#	% of L.E.L.
4:00 p.m.	Stanford	22	0
	University	17	15
	"	18	0
	Fort	12	5
	"	21	10

Stoddard had the old tank out. There was a gasoline odor in the pit where the tank had been. There appeared to be a piece of clay tile on the west side of the pit.

Wednesday, November 9, 1983

Time	Street	MH#	% of L.E.L.
3:30 p.m.	Stanford	22	0
	University	17	15
	"	18	15
	"	19	10
	Fort	12	0
	"	21	0

SIGNED

1200 W. Sunshine

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ATTENTION OF FILE DATE 11-22-83

DEPARTMENT

Stoddard Equipment put the new tank in.

Thursday, November 10, 1983

Time	Street	MH#	% of L.E.L.
10:45 a.m.	Stanford	22	0
	University	17	10
	"	18	20
	"	19	<10
	Fort	12	0
	"	21	0

Friday, November 11, 1983

Time	Street	MH#	% of L.E.L.
4:15 p.m.	Stanford	22	0
	University	17	10
	"	18	0
	"	19	0
	Fort	12	0
	"	21	10

Saturday, November 12, 1983

Time	Street	MH#	% of L.E.L.
2:15 p.m.	Stanford	22	0
	University	17	<10
	"	18	0
	"	19	0
	Fort	12	0
	"	21	10

Sunday, November 13, 1983

Time	Street	MH#	% of L.E.L.
1:00 p.m.	Stanford	22	0
	University	17	<25
	"	18	0
	"	19	0
	Fort	12	0
	"	21	10

The batteries in the explosion meter were weak.

Monday, November 14, 1983

Time	Street	MH#	% of L.E.L.
2:45 p.m.	University	17	15
	"	18	0
	Fort	12	20
	"	21	<10

We removed hose and stand.

SIGNED

1200 W. Sunshine

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ATTENTION OF FILE DATE 11-22-83

DEPARTMENT

Tuesday, November 15, 1983

Time	Street	MH#	% of L.E.L.
4:15 p.m.	University	17	5
	"	18	10
	Fort	12	0

Friday, November 18, 1983

Time	Street	MH#	% of L.E.L.
3:30 p.m.	Stanford	22	15
	University	17	30
	"	18	0
	"	19	0
	Fort	12	0
	"	21	15

Bob Corson and I set up the meter and fire hose again and started flushing. Beginning reading was 0481710. Mrs. Green at 1128 University complained about the hose being set up again.

Saturday, November 19, 1983

Time	Street	MH#	% of L.E.L.
2:00 p.m.	Stanford	22	5
	University	17	10
	"	18	0
	"	19	0
	Fort	12	5
	"	21	10

Sunday, November 20, 1983
Meter not working.

Monday, November 21, 1983

Time	Street	MH#	% of L.E.L.
10:35	Stanford	22	0
	University	17	<10
	"	18	0
	"	19	0
	Fort	12	0
	"	21	<10

Gene Pabst and I turned the meter off again. Ending reading 0484020.

SIGNED Karen Chandler
1200 W. Sunshine

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ATTENTION OF Bill Crossland DATE 11-23-83

DEPARTMENT Fire Marshal

Re: Gasoline in sewer at Fort and Sunshine

This is the information that you requested about the gasoline problem at Fort and Sunshine. Our readings for November 22, 1983 were:

Time	Street	MH#	% of L.E.L.
10:50 a.m.	Stanford	22	10
	University	17	10
	"	18	0
	Fort	12	25
	"	21	<5
3:15 p.m.	Stanford	22	0
	University	17	10
	"	18	0
	Fort	12	5
	"	21	0

Our readings for November 23, 1983 were:

Time	Street	MH#	% of L.E.L.
11:00 a.m.	Stanford	22	0
	University	17	10
	"	18	20
	Fort	12	0
	"	21	0

The resident at 1730 South Fort complained of a gasoline odor in her house. It was coming from the basement where water was running in through the wall. The explosion meter read 2% of L.E.L.

Because we are still experiencing a problem in this area, we would like for you to have Taylor Petroleum at 1201 W. Sunshine test their lines and tanks. Their home office address is:

Taylor Petroleum, Inc.
Box 3430
Amarillo, Texas 79105

Sharon Jones, the manager of Taylor Petroleum, called me on November 23, 1983, at 2:15 p.m. to ask about having her tanks checked. She said that Harold Peok told her that he had lost 44,000 gallons of fuel. She said that it would be better to send your letter to her instead of the home office.

cc: Bob Schaefer, P.E., Superintendent of Sanitary Services
Henry Cole, P.E., Sanitary Engineer
Greg Perkins, Department of Natural Resources
File

SIGNED Karen Chandler
Water Pollution Control Inspector II
Surveillance & Enforcement

1200 W. Sunshine

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ATTENTION OF FILE DATE December 7, 1983

DEPARTMENT

An addendum to memo to Bill Crossland of 11-23-83
Re: Gasoline in sewer at Fort and Sunshine

Wednesday, November 23, 1983

Time	Street	MH#	% of L.E.L.
2:30 p.m.	Stanford	22	0
	University	17	5
	"	18	<10
	Fort	12	0
	"	21	0

Gene and I picked up the fire hose and stand.

Friday, November 25, 1983

Time	Street	MH#	% of L.E.L.
9:40	Stanford	22	0
	University	17	10
	"	18	0
	Fort	12	0
	"	21	2-3
1:15	Stanford	22	0
	University	17	17
	"	18	0
	Fort	12	0
	"	21	10

Sunday, November 27, 1983

Time	Street	MH#	% of L.E.L.
12:00 p.m.	Stanford	22	0
	University	17	10
	"	18	15
	Fort	12	0
	"	21	0

It rained Saturday evening & Sunday day.

Monday, November 28, 1983

Time	Street	MH#	% of L.E.L.
2:30 p.m.	Stanford	22	0
	University	17	0
	"	18	0
	Fort	12	7
	"	21	0

I called Sharon Jones to tell her that the fire marshall would give her 30 days to get her tanks and lines checked after he sent his letter.

SIGNED

1200 W. Sunshine

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ATTENTION OF FILE DATE December 7, 1983

DEPARTMENT

Tuesday, November 29, 1983

Time	Street	MH#	% of L.E.L.
10:30 a.m.	Stanford	22	0
	University	17	5
	"	18	5
	Fort	12	0
	"	21	0

Wednesday, November 30, 1983

Time	Street	MH#	% of L.E.L.
1:45 p.m.	Stanford	22	0
	University	17	10
	"	18	15
	Fort	12	0
	"	21	0

Joe Montgomery of Montgomery Metalcraft called about Taylor Petroleum. He had several Petrotite tests to perform and he was trying to schedule the different businesses. Bill Crossland said he would write his letter to Taylor Petroleum this week.

Thursday, December 1, 1983

Time	Street	MH#	% of L.E.L.
10:00 a.m.	Stanford	22	0
	University	17	<5
	"	18	<10
	Fort	12	2
	"	21	<5

Friday, December 2, 1983

Time	Street	MH#	% of L.E.L.
10:30 a.m.	Stanford	22	0
	University	17	11
	"	18	12
	"	19	10
	Fort	12	0
	"	21	0-2
	Storm Sewer		0

Monday, December 5, 1983

Time	Street	MH#	% of L.E.L.
10:15	Stanford	22	0
	University	17	25
	"	18	0
	Fort	12	0
	"	21	0

Gene and I closed the cover of manhole 21 on Fort Street.

cc: Bob Schaefer, P.E., Supt. of Sanitary Services
Henry Cole, P.E., Sanitary Engineer
Greg Perkins, Dept. of Natural Resources
File

Karen Chandler

SIGNED Karen Chandler
Water Pollution Control Inspector III
Surveillance & Enforcement

1200 W. Sunshine

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ATTENTION OF Bill Crossland DATE 11-23-83

DEPARTMENT Fire Marshal

Re: Gasoline in sewer at Fort and Sunshine

This is the information that you requested about the gasoline problem at Fort and Sunshine. Our readings for November 22, 1983 were:

Time	Street	MH#	% of L.E.L.
10:50 a.m.	Stanford	22	10
	University	17	10
	"	18	0
	Fort	12	25
	"	21	<5
3:15 p.m.	Stanford	22	0
	University	17	10
	"	18	0
	Fort	12	5
	"	21	0

Our readings for November 23, 1983 were:

Time	Street	MH#	% of L.E.L.
11:00 a.m.	Stanford	22	0
	University	17	10
	"	18	20
	Fort	12	0
	"	21	0

The resident at 1730 South Fort complained of a gasoline odor in her house. It was coming from the basement where water was running in through the wall. The explosion meter read 2% of L.E.L.

Because we are still experiencing a problem in this area, we would like for you to have Taylor Petroleum at 1201 W. Sunshine test their lines and tanks. Their home office address is:

Taylor Petroleum, Inc.
Box 3430
Amarillo, Texas 79105

Sharon Jones, the manager of Taylor Petroleum, called me on November 23, 1983, at 2:15 p.m. to ask about having her tanks checked. She said that Harold Peck told her that he had lost 44,000 gallons of fuel. She said that it would be better to send your letter to her instead of the home office.

cc: Bob Schaefer, P.E., Superintendent of Sanitary Services
Henry Cole, P.E., Sanitary Engineer
Greg Perkins, Department of Natural Resources
File

SIGNED Karen Chandler
Water Pollution Control Inspector II
Surveillance & Enforcement

1200 W. Sunshine

CITY OF SPRINGFIELD
INTER-OFFICE MEMORANDUM

ATTENTION OF Bob Schaefer DATE 11-29-83

DEPARTMENT SANITARY SERVICES

This is an estimate of the cost of the gasoline in the sewer problem at Fort and Sunshine.

Water			$1,954.95
Sewer			2,278.50
Personnel - Time			
Chandler	31.25 hrs. (regular)		$ 449.69
	44.00 hrs. (x 1½ time)		949.74
Corson	11.75		202.45
Pabst	5.25		90.46
Lyman	1.00		17.23
Slaughter	.50		7.20
Short	.50		7.20
			$1,723.97
Equipment			
Flusher + a crew of 3	4½ hrs. @ 69.28/hr.		311.76
P2-15			
P2-22	462 miles @ .35/mi.		161.70
P2-24			
Total Cost			$6,430.88

cc: File

Karen Chandler
Water Pollution Control Inspector II
SIGNED Surveillance & Enforcement

1200 W. Sunshine